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T. Steptoe
5/18/01

Attorney's Docket No.: 42390.P5444 *Patent*

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of	)	
	)	
STEVEN R. ESKILDSEN *et al.*	)	Examiner: Dinh, T.
	)	
Application No. 09/103,110	)	Art Unit: 2841
	)	
Filing Date: 6/23/98	)	
	)	
For: IC PACKAGE WITH EDGE CONNECT CONTACTS	)	
	)	

Assistant Commissioner for Patents
Washington, D.C. 20231

AMENDMENT

Dear Sir:

4/4/01

In response to the Office Action mailed November 16, 2000, applicants respectfully request the Examiner to consider the following amendment and to consider the following remarks.

"Express Mail" mailing label number: EL351960915US
Date of Deposit: 5/8/01
I hereby certify that I am causing this paper or fee to be deposited with the United States Postal Service "Express Mail Post Office to Addressee" service on the date indicated above and that this paper or fee has been addressed to the Assistant Commissioner for Patents, Washington, D. C. 20231
JUANITA BRISCOE
(Typed or printed name of person mailing paper or fee)
(Signature of person mailing paper or fee)
5/8/01
(Date signed)

IN THE CLAIMS

Claims 1-14 are amended as follows. A clean copy of amended claims 1-14 is provided below. A marked-up version of the amended claims 1-14 follows the clean copy.

CLEAN CLAIMS

1. (Three Times Amended) An integrated circuit (IC) card, comprising:

an IC package having multiple leads extending away from said IC package; and

a casing to allow said IC package to be inserted into said casing, said casing is to encase said IC package, such that if said casing is inserted into a data processing device, said leads of said IC package is to provide an electrical interface between said IC package and said data processing device without use of a printed circuit board and a connector.

2. (Twice Amended) The IC card of claim 1, wherein said casing includes a front surface having a front opening, such that if said IC package is inserted into said casing, said IC package and said data processing device form said electrical interface through said front opening.

3. (Twice Amended) The IC card of claim 2, wherein said casing includes a back surface having a back opening such that said IC package is to be inserted into said casing through said back opening.

4. (Twice Amended) The IC card of claim 3, wherein said casing includes at least one stop at said back opening such that if said IC package is fully inserted into said casing, said stop is to hold said package securely within said casing.

5. (Twice Amended) The IC card of claim 2, wherein said casing includes a bottom surface having a bottom opening such that said IC package is to be inserted into said casing through said bottom opening.

6. (Twice Amended) The IC card of claim 5, wherein said casing includes at least one stop at said bottom opening such that if said IC package is fully inserted into said casing, said stop is to hold said package securely within said casing.

7. (Three Times Amended) A method of assembling an integrated circuit (IC) card, said method comprising:

providing an IC package, said IC package having multiple leads extending away from said IC package;

providing a casing; and

inserting said IC package into said casing, such that if said casing is inserted into a data processing device said multiple leads of said IC package is to provide an electrical interface between said IC package and said data processing device without use of a printed circuit board and a connector.

8. (Three Times Amended) The method of claim 7, wherein providing the casing includes providing the casing including a front surface with a front opening, such that if said IC package is inserted into said casing, said IC package and said data processing device form said electrical interface through said front opening.

9. (Three Times Amended) The method of claim 8, wherein providing the casing includes providing the casing including a back surface with a back opening, and said inserting said IC package includes inserting said IC package through said back opening of said casing.

10. (Three Times Amended) The method of claim 9, wherein providing the casing includes providing the casing including at least one stop on said back opening such that if said IC package is fully inserted into said casing through said back opening, said stop is to hold said IC package securely within said casing

11. (Three Times Amended) The method of claim 8, wherein providing the casing includes providing the casing including a bottom surface with a bottom opening, and inserting said IC package includes inserting said IC package through said bottom opening of said casing.

12. (Three Times Amended) The method of claim 11, wherein providing the casing includes providing the casing including at least one stop at said bottom opening such that if said IC package is fully inserted into said casing through said bottom opening, said stop is to hold said IC package securely within said casing.

13. (Three Times Amended) A method of connecting an integrated circuit (IC) to a receptacle of a data processing device, the method comprising:

providing an IC package having multiple leads extending away from said IC package; and

inserting said IC package into said data processing device such that said multiple leads from said IC package provide the electrical interface between said IC package and said data processing device without the use of a printed circuit board or a connector.

14. (Three Times Amended) The method of claim 13, wherein providing the IC package includes providing the IC package including a blade on pad socket device.

MARKED-UP VERSION

A marked-up version of amended claims 1-14 is provided below.

1. (Three Times Amended) An integrated circuit (IC) card, comprising:

an IC package having multiple leads extending away from said IC package [such that a portion of said multiple leads is not on said IC package]; and

a casing to allow said IC package to be inserted into said casing, said casing is to encase [that encases] said IC package, such that if said casing is inserted into a data processing device, said leads of said IC package is to provide an electrical interface between said IC package and said data processing device without use of a printed circuit board and a connector.

2. (Twice Amended) The IC card of claim 1, wherein said casing includes [has] a front surface having a front opening, such that if said IC package is inserted into said casing, said IC package and said data processing device form said electrical interface through said front opening.

3. (Twice Amended) The IC card of claim 2, wherein said casing includes [has] a back surface having a back opening such that said IC package is to be inserted into said casing through said back opening.

4. (Twice Amended) The IC card of claim 3, wherein said casing includes [has] at least one stop at said back opening such that if said IC package is fully inserted into said casing, said stop is to hold said package securely within said casing.

5. (Twice Amended) The IC card of claim 2, wherein said casing includes [has] a bottom surface having a bottom opening such that said IC package is to be inserted into said casing through said bottom opening.

6. (Twice Amended) The IC card of claim 5, wherein said casing includes [has] at least one stop at said bottom opening such that if said IC package is fully inserted into said casing, said stop is to hold said package securely within said casing.

7. (Three Times Amended) A method of assembling an integrated circuit (IC) card, said method comprising:

providing an IC package, said IC package having multiple leads extending away from said IC package [such that a portion of said multiple leads is not on said IC package];

providing a casing; and

inserting said IC package into said casing, such that if said casing is inserted into a data processing device said multiple leads of said IC package is to provide an electrical interface between said IC package and said data processing device without use of a printed circuit board and a connector.

8. (Three Times Amended) The method of claim 7, wherein providing the casing includes providing the casing [having] including a front surface with a front opening, such that if said IC package is inserted into said casing, said IC package and said data processing device form said electrical interface through said front opening.

9. (Three Times Amended) The method of claim 8, wherein providing the casing includes providing the casing including [having] a back surface with a back opening, and said inserting said IC package includes inserting said IC package through said back opening of said casing.

10. (Three Times Amended) The method of claim 9, wherein providing the casing includes providing the casing including [having] at least one stop on said back opening such that if said IC package is fully inserted into said casing through said back opening, said stop is to hold said IC package securely within said casing

11. (Three Times Amended) The method of claim 8, wherein providing the casing includes providing the casing including [having] a bottom surface with a bottom opening, and inserting said IC package includes inserting said IC package through said bottom opening of said casing.

12. (Three Times Amended) The method of claim 11, wherein providing the casing includes providing the casing including [having] at least one stop at said bottom opening such that if said IC package is fully inserted into said casing through said bottom opening, said stop is to hold said IC package securely within said casing.

13. (Three Times Amended) A method of connecting an integrated circuit (IC) to a receptacle of a data processing device, the method comprising:

providing an IC package having multiple leads extending away from said IC package [such that a portion of said multiple leads is not on said IC package]; and

inserting said IC package into said data processing device such that said multiple leads from said IC package provide the electrical interface between said IC package and said data processing device without the use of a printed circuit board or a connector.

14. (Three Times Amended) The method of claim 13, wherein providing the IC package includes providing the IC package including [having] a blade on pad socket device.

REMARKS

Reconsideration of this application, as amended, is respectfully requested. The following remarks are responsive to the Office Action mailed November 16, 2000.

Accompanying this amendment is (1) a Petition for a three-month extension of time to extend the period of response to May 16, 2001, and (2) an Information Disclosure Statement with copies of cited references.

Claims 1-14 are pending.

Claims 1-14 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

Claims 1-2 stand rejected under 35 U.S.C. § 102(a) as being anticipated by U.S. Patent No. 5,659,459 to Wakabayashi *et al.* ("Wakabayashi").

Claims 3-4 are rejected under 35 U.S.C. §103(a) as being unpatentable over Wakabayashi in view of U.S. Patent No. 4,926,034 to Banjo *et al.* ("Banjo").

Claims 5-6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wakabayashi in view of U.S. Patent No. 5,735,040 to Ochi *et al.* ("Ochi").

Claims 7-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wakabayashi in view of Banjo and Ochi.

35 U.S.C. § 112, Second Paragraph, Rejection

The Examiner has rejected claims 1-14 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. In particular, the Examiner states:

> Regarding to claims 1, 7, and 13, they are unclear. The applicant states that "an IC package having multiple leads extending away from the

IC package" also, he further claims that "a portion of the multiple leads is not on the IC package". It is contradiction in claimed invention. Are the leads extending away from the IC package and are not on the IC package's housing?

(p.2 Office Action 11/16/00).

Applicants respectfully submit that claims 1-14, as amended, comply with 35 U.S.C. § 112, second paragraph. Furthermore, applicants have amended claims 1, 7, and 13 to address the Examiner's remarks.

35 U.S.C. § 102(a) Rejection - Wakabayashi

The Examiner has rejected claims 1-2 under 35 U.S.C. § 102(a) as being anticipated by Wakabayashi. In particular, the Examiner states:

> As to claim 1, Wakabayashi discloses an IC card (503) as shown in figures 1-11 comprising an IC package (550) having multiple leads (551) extending away from the IC package and not on the IC package. A casing (100, 120) encases the package without the use of the printed circuit board and connector (column 10, lines 1-5, column 16, lines 33-41).

(p. 3 Office Action 11/16/00).

Applicants respectfully submit that claim 1, as amended, is not anticipated by Wakabayashi. To anticipate claim 1, Wakabayashi must disclose each and every limitation of claim 1. Claim 1 includes the limitations of:

> An integrated circuit (IC) card, comprising:
> an IC package having multiple leads extending away from said IC package; and
> a casing to allow said IC package to be inserted into said casing, said casing is to encase said IC package, such that if said casing is inserted into a data processing device, said leads of said IC package is to provide an electrical interface between said IC package and said data processing device without use of a printed circuit board and a connector.

(Claim 1)(emphasis added).

A distinction of claim 1 over Wakabayashi is an IC package having multiple leads extending away from said IC package as recited in claim 1.

Wakabayashi, however, in FIG. 3, discloses a **printed circuit board** 550 with an insertion plug 551, which the Examiner correlates to the leads of the IC package as recited in claim 1. Insertion plug 551 consists of a series of electrodes or contacts arranged in parallel on surfaces of printed circuit board 550 for contacting matching electrical contacts inside a printer cartridge slot. (See Col.10, lines 38-46). Thus, insertion plug 551 does not disclose leads extending away from the IC package as recited in claim 1. Instead, insertion plug 551 is part of the printed circuit board 550. Claim 1 recites limitations avoiding use of a printed circuit board.

Another distinction of claim 1 over Wakabayashi is a casing to allow said IC package to be inserted into said casing as recited in claim 1.

Wakabayashi, in FIG. 2, show a housing 100 and lower case 120 attached with printed circuit board 550 having insertion plug 551 with multiple assembly components. Printed circuit board 550, however, is not insertable into housing 100 or lower case 120. Thus, the casing as recited in claim 1 is not disclosed by Wakabayashi.

Still another distinction of claim 1 over Wakabayashi is the casing to encase said IC package, such that if said casing is inserted into a data processing device, said leads of said IC package is to provide an electrical interface between said IC package and said data processing device without use of a printed circuit board and a connector as recited in claim 1.

As noted above, Wakabayashi requires a printed circuit board 550 and a cartridge slot to receive insertion plug 551 to form an electrical interface. By way of contrast, claim 1 recites an electrical interface being provided by leads of an IC package and a data processing device without use of a printed circuit board and a connector.

Therefore, in view of the above distinctions, Wakabayashi does not disclose each and every limitation of claim1. As such, claim 1 is not anticipated by Wakabayashi and is condition of allowance. Given that claim 2 is dependent on claim 1, claim 2 is therefore not anticipated by Wakabayashi and is in condition of allowance.

35 U.S.C. § 103(a) Rejection - Wakabayashi and Banjo

The Examiner has rejected claims 3-4 under 35 U.S.C. § 103(a) as being unpatentable over Wakabayashi in view of Banjo. In particular, the Examiner states:

> As to claims 3 and 4, Wakabayashi discloses all of the limitations of claimed invention, except for the IC card having a surface including a back opening, and there are at least one stop at the back opening. Banjo teaches the IC card (100) as shown in figure 4A-4C comprising a bottom surface having a bottom opening (2) and including at least one stop (21) at the back opening to hold the IC package in the casing (column 2, lines 62-65, column 3, lines 5-16). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the IC card of Wakabayashi and provide the back surface having an opening including the stop for holding the IC card into the casing as taught by Banjo because it is design choice of the IC card having an opening on the back of the card for insert the card into the casing of the IC card and the stops that has function to hold and secure the card into the casing.

(p. 4, Office Action 11/16/00)

Applicants respectfully submit that Banjo does not cure the deficiencies of Wakabayashi with respect to claim 1. To cure the deficiencies of Wakabayashi with respect to claim 1, Wakabayashi and Banjo individually or in combination must disclose or suggest each and every limitation of claim 1.

A distinction of claim 1 over Banjo is an IC package having multiple leads extending away from said IC package as recited in claim 1.

Banjo, however, discloses a card reader connector 100 having electrodes 9 for receiving an IC card 4. (See. FIGS. 4A-4C and 5A-5C). Card reader connector 100 with electrodes 9

does not read on an IC package having multiple leads extending away from said IC package as recited in claim 1.

Another distinction of claim 1 over Banjo is a casing to allow said IC package to be inserted into said casing as recited in claim 1.

Card reader connector 100 of Banjo is not a casing for an IC package. Instead, card reader connector 100 is a receiving unit to receive an IC card 4.

Still another distinction of claim 1 over Banjo is the casing to encase said IC package, such that if said casing is inserted into a data processing device, said leads of said IC package is to provide an electrical interface between said IC package and said data processing device without use of a printed circuit board and a connector as recited in claim 1.

The Examiner construes card reader connector 100 to read on the casing as recited in claim 1. Card reader connector 100, however, is not inserted into a data processing device. Instead, card reader connector 100 is to receive IC card 4. IC card 4 also does not read on the claimed IC package or casing. Similar to Wakabayashi, IC card 4 does not disclose an IC package having leads extending away from the package, and the IC package it to be inserted into a casing.

Furthermore, neither Wakabayashi nor Banjo disclose or suggest individually or in combination a "stop" as claimed. It is also respectfully submitted that Wakabayashi does not suggest a combination with Banjo and Banjo does not suggest a combination with Wakabayashi. It would be impermissible hindsight to combine Wakabayashi with Banjo based on applicants' own disclosure.

Therefore, in view of the above distinctions, neither Wakabayashi nor Banjo individually or in combination disclose each and every limitation of claim 1. As such, claim 1 is not

rendered obvious by Wakabayashi in view of Banjo under 35 U.S.C. § 103(a) and is in condition of allowance. Given that claims 3 and 4 depend on claim 1, claims 3 and 4 are not rendered obvious under 35 U.S.C. § 103(a) and are in condition of allowance.

35 U.S.C. § 103(a) Rejection - Wakabayashi and Ochi

The Examiner has rejected claims 5-6 under 35 U.S.C. § 103(a) as being unpatentable over Wakabayashi in view Ochi. In particular, the Examiner states:

> As to claims 5-6, Wakabayashi discloses an IC card and satisfies all of the limitation of the claims, except for the IC card wherein the casing having the bottom surface that has a bottom opening, and the casing has at least one stop at the bottom opening. Ochi shows the IC card (10) having the casing that has the bottom surface including the opening (2a), the casing has at least one stop (20) (column 3, line 65-67, column 4, lines 1-4). it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the IC card assembly of Wakabayashi and provide the casing of the IC card that has bottom surface including an opening and stop to hold the IC package as taught by Ochi because it is design choice of the IC card having an opening at the bottom of the card for insert the card into the casing of the IC card and the stops that has function to hold and secure the card into the casing.

(p. 5, Office Action 11/16/00)

Applicants respectfully submit that Ochi does not cure the deficiencies of Wakabayashi with respect to claim 1. To cure the deficiencies of Wakabayashi with respect to claim 1, Wakabayashi and Ochi individually or in combination must disclose or suggest each and every limitation of claim 1.

A distinction of claim 1 over Ochi is a casing to allow said IC package to be inserted into said casing as recited in claim 1.

Ochi, however, discloses an IC card 10 having obverse and reverse main surfaces. Mounted at one of these main surfaces on circuit board 2 are an IC package 3, which serves as the function part, and another part 5 with a circuit pattern 2b being formed at least at the

mounting surface of the circuit board 2. Hence, IC package 3 is not inserted into a casing as recited in claim 1. Instead, IC package 3 is mounted on circuit board 2.

Another distinction of claim 1 over Ochi is the casing to encase said IC package, such that if said casing is inserted into a data processing device, said leads of said IC package is to provide an electrical interface between said IC package and said data processing device without use of a printed circuit board and a connector as recited in claim 1.

As noted above, Ochi teaches an IC package 3 mounted on circuit board 2. Claim 1, however, recites an IC package and casing that can form an electrical interface without a printed circuit board (i.e., circuit board 2).

Furthermore, neither Wakabayashi nor Ochi individually or in combination disclose or suggest a "stop" or a "bottom opening" as claimed. It is also respectfully submitted that Wakabayashi does not suggest a combination with Ochi and Ochi does not suggest a combination with Wakabayashi. It would be impermissible hindsight to combine Wakabayashi with Ochi based on applicants' own disclosure.

Therefore, in view of the above distinctions, neither Wakabayashi nor Ochi individually or in combination disclose or suggest each and every limitation of claim 1. As such, claim 1 is not rendered obvious by Wakabayashi in view of Ochi under 35 U.S.C. § 103(a) and is in condition of allowance. Given that claims 5 and 6 depend on claim 1, claims 5 and 6 are not rendered obvious under 35 U.S.C. § 103(a) and are in condition of allowance.

35 U.S.C. § 103(a) Rejection - Wakabayashi, Banjo, and Ochi

Claims 7-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wakabayashi in view of Banjo and Ochi. In particular, the Examiner states:

> Regarding to claims 7-14, the method steps are necessitated by the IC card structure as it is disclosed by Wakabayashi in view of Banjo and Ochi.

(p. 6, Office Action 11/16/00).

Applicants respectfully submit that neither Ochi nor Banjo does not cure the deficiencies of Wakabayashi with respect to claim 7, as amended. To cure the deficiencies of claim 7, Wakabayashi, Banjo, and Ochi individually or in combination must disclose or suggest each and every limitation of claim 7. Claim 7 includes the limitations of:

> A method of assembling an integrated circuit (IC) card, said method comprising:
> providing an IC package, said IC package having multiple leads extending away from said IC package;
> providing a casing; and
> inserting said IC package into said casing, such that if said casing is inserted into a data processing device said multiple leads of said IC package is to provide an electrical interface between said IC package and said data processing device without use of a printed circuit board and a connector.

(Claim 7)(emphasis added).

As noted above, a distinction of claim 7 over Wakabayashi, Banjo, and Ochi is inserting said IC package into said casing, such that if said casing is inserted into a data processing device said multiple leads of said IC package is to provide an electrical interface between said IC package and said data processing device without use of a printed circuit board and a connector as recited in claim 7.

It is also respectfully submitted that neither Wakabayashi, Banjo, nor Ochi suggest a combination with each other. Furthermore, it would be impermissible hindsight to combine the references based on applicants' own disclosure.

Therefore, in view of the above distinctions, neither Wakabayashi, Banjo, nor Ochi individually or in combination do not disclose or suggest each and every limitation of claim 7, claim 7 is not obvious over Wakabayashi, Banjo, and Ochi and is in condition of allowance.

Given that claims 8-14 depend directly or indirectly on claim 7, claims 8-14 are not obvious over Wakabayashi, Banjo and Ochi and are in condition of allowance.

It is respectfully submitted that in view of the amendments and arguments set forth herein, the applicable rejections and objections have been overcome. Accordingly, applicants request that claims 1-14 be found in condition of allowance.

If a telephone interview would expedite the prosecution of this application, the Examiner is invited to contact Mike Kim at (408) 947-8200.

If there are any additional charges, please charge them to our Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Date: May 8, 2001

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